UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,121	05/14/1999	TIMOTHY HALL ADDINGTON	A-5035	2127

5642 7590 04/25/2002

SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE, GA 30044

EXAMINER	
SHANG, ANNAN Q	
ART UNIT	**PAPER NUMBER**
2614	5

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/312,121	ADDINGTON, TIMOTHY HALL	
	Examiner	Art Unit	
	Annan Q Shang	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6, 8, 10-22, 28 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotwald (5,987,518) and further in view of Hakulien (WO97/20413).

As to claim 1, note the Gotwald reference, Figure 1 and 2, discloses a method for transporting Internet Protocol data over subscriber television system including a headend 12, a transmission medium 16, and a plurality of Home Communication Terminals 18, with at least one Home Communications Terminal authorized for receiving the Internet Protocol (IP) data. The claim is met as follows: the claimed 'establishing a subnet connection for transporting the IP data from a server in the headend to an external network' is met by broadband channel 16 establishes connection with standard network 20 to transport IP data from server 12 to client 18, the claimed 'receiving at the headend a request for an IP connection from the authorized Home Communication Terminal' is met by col. 3, lines 61-65, note server 12 receives a request for an IP connection from client 18, the claimed 'assigning at the headend an Internet Protocol address to the authorized Home Communications Terminal for the duration of the Internet Protocol connection' is met by module 44 which assigns at the

server IP addresses, note col. 4, lines 28-38, the claimed 'establishing a route for the Internet Protocol data from the authorized Home Communications Terminal to the server and from the server to the authorized Home Communications Terminal over the transmission medium' is met by the bi-directional standard network 20 which establishes Point-to-Point Protocol (PPP) with the server and the client in both directions, note 20 in Figure 2, the claimed 'transmitting from the headend to the authorized Home Communications Terminal the route for the Internet Protocol connection' is met by col. 4, lines 44-50. Gotwald reference further teaches, communicating between the authorized Home Communications Terminal and the external network via the route and the subnet connection, note col. 3, lines 32-50 the broadband channel 16 and standard network 20, but fails to specifically teach releasing the route and assigned IP address upon termination of the IP connection. Note the Hakulinen reference, which discloses a packet switching system using telephone and satellite transmission. The reference discloses releasing the route and assigned Internet Protocol address upon termination of the Internet Protocol connection, note page 5, lines 9-15. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald system with addition of releasing IP route as taught by Hakulinen, because it would advantageously make the address available for reuse thereby providing security to the network and making efficient use of the bandwidth.

As to claim 2, Gotwald further discloses a method where the Internet Protocol data is encapsulated and communicated between the authorized Home

Communications Terminal and the headend within a digital data stream that includes television programming, note col. 3, lines 45-65.

As to claim 3, Gotwald further disclose a method where the IP data is encapsulated into Motion Picture Experts Group (MPEG) transport packets, note Figure 2, MPEG2 streams 10.

As to claim 6, note the Gotwald reference, discloses that discussed in claim 1 above but fails to teach the steps of establishing and releasing the route for Internet Protocol data comprises Digital Storage Media-Command and Control (DSM-CC) signaling techniques. Note the Hakulinen reference teaches the above limitation, note figure 4, page 7, lines 1+ and page 9, lines 4-24. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald system with Digital Storage Media-Command and Control (DSM-CC) signaling techniques, as taught by Hakulinen, for signaling and IP data encapsulation.

As to claim 8, the Gotwald reference teach all the limitations discussed in claim 1 above, but fails to specifically teach releasing the route and assigned IP address upon termination of the IP connection and using session security key uniquely associated with the route. Note the Hakulinen reference, discloses releasing the route and assigned IP address upon termination of the IP connection, note page 5, lines 9-15 and using encryption key uniquely associated with the route to a particular STB. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald system with unique key to

identify the route to a particular STB, as taught by Hakulinen, to providing security to the network.

As to claim 10, the claimed 'method of creating and removing IP data communications paths within a television comprising...' is met by that discussed in claim 1.

Claim 11 is met by that discussed in claim 1.

As to claim 12, the claimed 'an application server for establishing, using, and deleting an IP data communications route within a television system between the application server and an authorized Home Communications Terminal and between the application server and an external network, the application server comprising...' is met by that discussed in claim 1.

Claim 13 is met by that discussed in claim 3.

Claim 14 is met by that discussed in claim 4.

Claim 15 is met by that discussed in claim 5.

Claim 16 is met by that discussed in claim 7.

Claim 17 is met by that discussed in claim 6.

As to claim 18, the claimed 'an application server for establishing and using an Internet Protocol data communications route within a television system between the application server and an authorized Home Communications Terminal and between the application server and an external network, the application server comprising....is met by that discussed in claim 1. the claimed 'the a memory for maintaining a database of all IP...' is inherently taught.

Claim 19 is met by that discussed in claim 3.

Claim 20 is met by that discussed in claim 6.

As to claim 21, the claimed 'a subscriber television system for communicating IP data with an external network, the system comprising...' is met by that discussed in claim 1

Claim 22 is met by that discussed in claim 3.

Claim 28 is inherently taught as discussed above.

Claim 30 is met by that discussed in claim 8.

Claim 31 is inherently taught.

Claim 32 is met by that discussed in claim 6.

Claims 4, 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotwald (5,987,518) and Hakulinen (WO 97/20413) as applied to claims 1-3, 6, 8, 10-22, 28 and 30-32 above, and further in view of Mohammed (5,894,479).

As to claim 4, the combination above teaches a method of encapsulating IP data in MPEG2 stream, multiplex and transmit to digital television set top box, releasing the address and making it available for reuse at the end of transmission. Neither reference specifically teach the step of assigning an Internet Protocol address that includes correlating the assigned Internet Protocol address to a Media Access Control (MAC) address associated with the authorized Home Communication Terminal (HCT). Note the Mohammed reference, which discloses a method of providing address resolution information for self registration of clients on power-up or dial-in. The reference discloses a system having a server and a client that allows the headend server to relate the IP

addresses of the client's upstream devices to one or more MAC addresses of the downstream devices, note Figure 5 and col. 3, lines 38-50. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald and Hakulinen systems and correlate IP address to MAC address associated with the authorized HCT or STB in order to use one device for both upstream and downstream transmission and to support multiple IP addresses.

Claims 23 and 29 are met by that discussed in 4.

Claims 5, 7, 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotwald (5,987,518) and Hakulinen (WO 97/20413) as applied to claims 1-3, 6, 8, 10-22, 28 and 30-32 above, and further in view of Logston et al (5,481,542).

As to claim 5, the combination of Gotwald and Hakulinen references in claim 1 above teaches a method of encapsulating IP data in MPEG2 stream, multiplex and transmit to digital television set top box, releasing the address and making it available for reuse at the end of transmission. Neither reference specifically teach the step of establishing the route for the Internet Protocol data that includes establishing and using a portion of a continuous feed session for the Internet Protocol data from the server to the authorized Home Communication Terminal. Note the Logston et al reference, which disclose an interactive information services control system. The reference discloses a video session connection (VSC) for setting up and maintaining interactive sessions between the set-top terminal and headend during the time interactive programming is provided to a client, note Figure 11 and col. 26, lines 38-52. Therefore the examiner

submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald and Hakulinen systems with Continuous feed sessions (CFS) for the purpose of allocating a portion of the MPEG transport stream for a particular function.

As to claim 7, the combination of Gotwald and Hakulinen references in claim 1 above teaches a method of encapsulating IP data in MPEG2 stream, multiplex and transmit to digital television set top box, releasing the address and making it available for reuse at the end of transmission. And further teach establishing a route includes using a protocol for the IP data from the authorized Home Communications Terminal to the server, but fail to teach the protocol being selected from Time Division Multiple Access and Slotted-Aloha. Note the Logston et al reference, teach TDMA and slotted ALOHA techniques, note col. 10, lines 35-56. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald and Hakulinen systems with TDMA and slotted ALOHA for the purpose preventing contention among the STBs connected to the same reverse path and provide resolution of signaling throughput when simultaneous transmissions occurs.

Claims 24, 25 and 26 are met by that discussed in claim 5.

Claim 27 is met by that discussed in claim 7.

Claim 28 is inherently taught in claim 7.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gotwald (5,987,518), Hakulinen (WO 97/20413) and Mohammed (5,894,479) as applied to claims 1-8, 10-32 above, and further in view of Logston et al (5,481,542).

As to claim 9, note the Gotwald reference, Figure 1 and 2, discloses a method for transporting Internet Protocol data over subscriber television system including a headend 12, a transmission medium 16, and a plurality of Home Communication Terminals 18, with at least one Home Communications Terminal authorized for receiving the IP data, comprising the steps of; establishing a subnet connection for transporting the Internet Protocol data from a server in the headend to an external network, note broadband channel 16 which establishes connection with standard network 20 to transport IP data from server 12 to client 18, receiving at the headend a request for an Internet Protocol connection from the authorized Home Communication Terminal, module 44 assigning IP addresses at the headend to the authorized Home Communications Terminal for the duration of the IP connection, note col. 4, lines 28-38, establishing a downstream route for the IP data from the server to the authorized Home Communications Terminal over the transmission medium within a downstream bandwidth, where the downstream bandwidth includes at least a portion of a television program, note Figure 2 and col. 3, lines 33-50, establishing an upstream route for the Internet Protocol data from the authorized Home Communications Terminal to the server over the transmission medium within an upstream bandwidth, note standard network 20 establishes upstream route for IP from client 18 to sever 12, transmitting from the headend to the authorized Home Communications Terminal the route for the

Internet Protocol connection, note col. 4, lines 44-50, communicating the Internet Protocol data between the authorized Home Communications Terminal and the server via the downstream route and the upstream route, where the IP data is encapsulated into packets, note col. 4, lines 44-50. Gotwald reference further teaches, communicating between the authorized Home Communications Terminal and the external network via the route and the subnet connection, note col. 3, lines 32-50 the broadband channel 16 and standard network 20, but fails to specifically teach establishing an upstream route for the Internet Protocol data from the authorized Home Communications Terminal to the server over the transmission medium within an upstream bandwidth, where the upstream route uses a protocol selected from Time Division Multiple Access (TDMA) and Slotted-Aloha, releasing the route and assigned IP address upon termination of the IP connection. As discussed in claim 1 above, Hakulinen, teaches releasing the route for reuse and assigning IP address upon termination of the IP connection. Both reference fail to teach receiving at the headend a request for an IP connection from the authorized Home Communication Terminal that includes a Media Access Control (MAC) address associated with the authorized Home Communication Terminal, maintaining in a database in the headend, a relationship between the assigned IP address and the Media Access Control (MAC) address associated with the authorized Home Communication Terminal, the relationship being maintained for at least the duration of the IP connection. Note the Mohammed reference, teaches receiving at the headend a request for an IP connection from the

authorized Home Communication Terminal that includes a Media Access Control (MAC) address associated with the authorized Home Communication Terminal, maintaining in a database in the headend, a relationship between the assigned IP address and the Media Access Control (MAC) address associated with the authorized Home Communication Terminal, the relationship being maintained for at least the duration of the IP connection, note Figure 5 and col. 3, lines 38-50. Logston et al reference teach establishing an upstream route for the Internet Protocol data from the authorized Home Communications Terminal to the server over the transmission medium within an upstream bandwidth, where the upstream route uses a protocol selected from Time Division Multiple Access (TDMA) and Slotted-Aloha. Therefore the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gotwald system with teachings of Hakulinen, Mohammed and Logston et al for the advantages as noted above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alonso et al (6,184,878) disclose an interactive world web access using a set top terminal in a video on demand system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annan Q Shang whose telephone number is 703-305-2156. The examiner can normally be reached on 700am-500pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-5991 for regular communications and 703-746-5991 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service whose telephone number is 703-306-0377.

AJS

Annan Q. Shang
April 22, 2002

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600